

REMARKS

In an Office Action dated June 10, 2008, the Examiner has withdrawn the previous rejections of the Claims 1-21 under 35 USC § 103(a) as unpatentable over the previously cited references to U.S. Patent No. 7,185,071 issued to Berg et al. in view of U.S. Patent No. 7,181,731 issued to Pace et al. and USPN 7,093,247 issued to Ashworth et al. Instead, the Examiner has issued an entirely different rejection of Claims 1-21 under 35 USC § 103(a) as being unpatentable over newly cited references to USPN 6,976,473 issued to Novaes (“Novaes”) in view of USPN 7,251,662 issued to Behman (“Behman”), in further view of USPN 6,886,035 issued to Wolff (“Wolff”). Further the Examiner has rejected Claims 7, 14 and 21 under 35 USC § 103(a) as being unpatentable over Novaes in view of Behman in view of Wolff, further in view of another newly cited reference to US Patent Publication No. 2006/0106590 issued to Tseng (“Tseng”).

In this response, Applicant cancels Claims 3-4, 10-11 and 15-21 without prejudice, and traverses the rejection of the remaining Claims 1-2, 5-9 and 12-14. Applicant requests reconsideration of Claims 1-2, 5-9 and 12-14 in view of amendments to the claims and arguments as set forth in detail in the following remarks.

CLAIM REJECTIONS – 35 U.S.C. § 103

Claims 1-21 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over the newly cited references to Novaes in view of Behman, and further in view of Wolff. Applicant traverses the rejections and notes that Claims 3-4, 10-11 and 15-21 have been canceled without prejudice rendering the rejection of those claims moot.

In order to advance the prosecution of the application to allowance as quickly as possible, and without admitting the propriety of the rejections, Applicant has amended independent Claims 1 and 8 as well as dependent Claims 2, 5-7, 9 and 12-14 to clarify the subject matter that the Applicant regards as the invention. Support for the amendments is found throughout the specification and drawings.

Claim 1, as currently amended, reads as follows:

1. A method for starting a group of enterprise servers belonging to a cluster of enterprise servers, the method comprising:

registering modifications to *configuration data in a hierarchical data object, the configuration data defining a cluster of enterprise servers, the cluster having a plurality of groups of enterprise servers and a central database accessible to the plurality of groups of enterprise servers, the configuration data in the hierarchical data object stored within the central database;*

receiving a notification that modifications to the configuration data have been registered;

comparing configuration data stored within a local file system of each enterprise server with the *modified configuration data in the hierarchical data object* stored within the central database to identify any binaries and/or configuration settings in the configuration data stored within the local file system which are out-of-date *as compared to the binaries and/or configuration settings in the modified configuration data in the hierarchical data object related to the cluster and stored within the central database;*

if the binaries and/or configuration settings in the configuration data stored within the local file system are out-of-date *as compared to the binaries and/or configuration settings in the modified configuration data in the hierarchical data object related to the cluster and stored within the central database*, then updating the binaries and/or configuration settings in the configuration data stored within the local file system from the binaries and/or configuration settings in the *modified configuration data in the hierarchical data object related to the cluster and stored within the central database* prior to starting each enterprise server in a group of enterprise servers; and

starting each enterprise server in the group of enterprise servers using the updated binaries and/or configuration settings in the configuration data stored within the local file system.

Applicant notes that many of the Examiner's citations to disclosure appearing in the references did not identify from which reference the citations were made. Applicant attempted to match the citations to the proper reference as best as possible, and respectfully requests that the Examiner fully identify from which reference a citation is made in future actions.

The Examiner appears to rely on Novaes as generally disclosing a cluster of enterprise servers and the central database and comparing whether cluster configurations are out of date (Figs. 2, 11 and 17, Col. 7, 9 and 14 of Novaes). A review of Novaes indicates that it discloses a cluster which it defines as "a distributed computing environment which has the capability of sharing resources." (Novaes, Col 4, Lines 31-32). A cluster includes one or more nodes which share resources and is managed by a cluster architecture. The cluster architecture includes several cluster components such as a Distributed Configuration Manager (DCM) to synchronize cluster configuration databases, a System Registry to serve data stored in the cluster configuration databases, and a Liveness subsystem to maintain the list of which nodes are members of a cluster. One of the cluster components is a Distributed Configuration Manager Daemon (DCMD) that bootstraps the cluster, i.e, it starts the other cluster components with the appropriate cluster configuration. The DCMD will check the validity of the local cluster definition on a node before starting the node join process. The validity of the local cluster definition is based on the validity of the identifier passed by the operating system in the bootstrap sequence, referred to herein as the original copy (UID) 1110; the locally stored (cached) copy 1108 and the globally stored copy 1106. If invalid (i.e. if the identifiers don't all match) the DCMD either deletes the node or corrects the node definition,

including updating *both* the local and global identifiers to match the hardware identifier. (See Novaes, Col 13-15, Col. 15, Scenario 3).

In relying on Novaes, the Examiner appears to equate the operating system identifiers disclosed in Novaes with the binaries and configuration settings recited in the claims; specifically, the local identifiers with the binaries and configuration settings stored in the local file system, and the global identifiers with the binaries and configuration settings stored in the configuration data in the central database. Applicant disagrees, respectfully submitting that an operating system identifier is not the same as the binaries and configuration settings disclosed and recited in the present application, and urges the Examiner to reconsider. Moreover, disclosing that both the local and global identifiers are updated (see, for example, Scenario 3 described in Novaes) would appear to teach away from the claimed invention, which specifically recites updating the binaries and configuration settings in the local file system, but not in the central database.

The Examiner further relies on Behman as generally disclosing receiving a notification of a modification to configuration data for the cluster (Behman, Col. 16, Abstract, and Figs. 1, 2 and 3), apparently conceding that Novaes does not disclose a notification. A review of Behman indicates that Behman generally discloses the manipulation of registries on a computer system, and in particular discloses a trigger function to send an alert message to processes running on other systems in a cluster to propagate configuration changes across a network having multiple registries. (Behman, Col. 16). Applicant submits that techniques for manipulating a computer system's registry are not the same as updating configuration data in a local file system as disclosed and claimed in the present application, and urges the Examiner to reconsider.

The Examiner further relies on Wolff as generally disclosing updating the binaries and/or configuration settings in the local file system from the modified ones in the central database prior to starting each enterprise server in the group of enterprise servers. A review of Wolff indicates that it discloses dynamic load balancing among multiple nodes in which a node obtains temporary master status and temporarily locks a shared configuration database so that it can, among other things, update the database to reflect its additional processing capability and replicate a copy of the database to the other nodes (Wolff, Col. 26, Figs. 9A-9E). In relying on Wolff, the Examiner appears to be equating the updating of the shared configuration database with the modifications to the configuration data in the central database as described and recited in the present application. Applicants disagree, and submit that a node directly updating the shared configuration database would appear to teach away from the claimed invention which specifically recites updating the configuration data in the local file system after determining that it is out-of-date with that stored in the central database. Moreover, replicating a copy of the database to a node would appear to teach away from the claimed invention which specifically recites updating only those binaries and configuration settings in the local file system determined to be out-of-date as compared to the configuration data in the central database.

The Examiner further relies on Wolff (Figs. 5a, 5d, 6 and 7a-d) as disclosing a configuration hierarchy stored within a hierarchical data object in the central database. Applicant disagrees. The cited figures of Wolff disclose data structures that comprise the configuration database (see Wolff, Col. 19, Lines 38-43). The data structures appear to be rather conventional data structures that contain records for each node subject to load

rebalancing in a network. The records contain data that describe such things as the relative processing capability of a node and the resources with which the node is preferentially associated. There is no indication that the records are organized into any type of hierarchy or are contained in a hierarchical data object as described and recited in the present application. Accordingly, Applicant urges the Examiner to reconsider his interpretation of Wolff.

The Examiner concludes that the combination of Novaes and Behman is obvious “for the motivation of advantageously providing a set of generic tools for developers to use in accessing and manipulating registries of all types to reduce the time and effort expended in creating computer programs that interact with multiple registries.” (Office Action, Page 6) The Examiner further concludes that the combination of Novaes and Behman with Wolff is obvious “for the motivation of advantageously providing an improved system and method for distributed processing over a network.” (Office Action, Page 7). Applicant disagrees and submits that the Examiner has failed to make a prima facie case of obviousness based on the disclosures of Novaes, Behman and Wolff, either alone or in combination, and requests the withdrawal of the rejection of Claim 1 under Section 103(a).

Independent Claims 8 and 22 contain similar limitations as are recited in Claim 1 and are patentable over Novaes, Behman and Wolff, either alone or in combination for at least the same reasons articulated above with respect to Claim 1. Accordingly, Applicant requests the withdrawal of the rejection of Claim 8 under Section 103(a), and further requests consideration of new Claim 22 for the same reason.

With reference to the rejection of the remaining dependent Claims 2, 5-7, 9 and 12-14, Applicant submits that they are allowable because they depend from allowable independent Claims 1 and 8 for the reasons articulated above, and because of their additional limitations, and requests that the Examiner withdraw the rejection. New Claims 23-26 depend from allowable independent Claim 22 and are allowable for at least the same reason as is Claim 22 and because of their additional limitations.

Claims 7, 14 and 21 were further rejected under 35 U.S.C. §103(a) as being unpatentable over Novaes, in view of Behman, in view of Wolff, further in view of Tseng. Applicant traverses the rejections and submits that they are allowable because they depend from allowable independent Claims 1 and 8 as articulated above with respect to Claim 1, and because of their additional limitations. Applicant respectfully requests that the Examiner withdraw the rejection of Claims 7 and 14. Claim 21 has been canceled and the rejection is moot. New Claim 26 is allowable for at least the same reason as Claims 7 and 14.

CONCLUSION

For at least the foregoing reasons, Applicants submit that the rejections have been overcome. Therefore, Claims 1-2, 5-9, 12-14 and 22-26 are in condition for allowance and such action is earnestly solicited. The Examiner is respectfully requested to contact the undersigned by telephone if such contact would further the examination of the present application. Please charge any shortages and credit any overcharges to our Deposit Account number 02-2666.

Respectfully submitted,
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Date: September 17, 2008

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